

ABSTRACT OF THE DISCLOSURE

The magnetoresistance effect film is capable of performing enough function without employing an antiferromagnetic layer. The film comprises: a seed layer; a first pinned magnetic layer formed on the seed layer; an antiferromagnetically coupling layer formed on the first pinned magnetic layer; a second pinned magnetic layer formed on the antiferromagnetically coupling layer; a nonmagnetic layer formed on the second pinned magnetic layer; a free magnetic layer formed on the nonmagnetic layer; and a protection layer formed on the free magnetic layer. The seed layer fixes magnetizing directions of the first and the second pinned magnetic layer. The seed layer is made of a material which does not exchange-couple with the first pinned magnetic layer.